

AMENDMENT

IN THE CLAIMS:

Please amend the claims as follows:

1. (Currently amended) A substrate processing apparatus for processing a substrate with a processing liquid fed to the substrate, comprising:

a holding member for holding the substrate; and

a lower side member connected to a shaft is put through the holding member, the shaft being vertically movable up and down relative to the holding member by a lift mechanism, whereby the lower side member is movable relatively with respect to an undersurface of the substrate held by the holding member between a processing position near the undersurface of the substrate and a retreat position remote from the undersurface of the substrate, the lower side member further including a processing liquid feed path having a processing liquid discharge opening for feeding the processing liquid to a space between an upper surface of the lower side member moved to the processing position and the undersurface of the substrate held by the holding member,

wherein the lower side member comprises a body structured by metal materials and a coating layer of a hydrophobic resin on a surface of the body, the surface of the coating layer contacts with the processing liquid, the coating layer has a hydrophobicity enough to form a stable layer of processing liquid in the space between the upper surface of the lower side member and the undersurface of the substrate.

2. (Original) The substrate processing apparatus according to claim 1, wherein the holding member is rotatable.

3. (Currently amended) A substrate processing apparatus for processing a substrate with a processing liquid fed to the substrate, comprising:

a holding member for holding the substrate; and

a lower side member connected to a shaft is put through the holding member, the shaft being vertically movable up and down relative to the holding member by a lift mechanism, whereby the lower side member is movable relatively with respect to an undersurface of the substrate held by the holding member between a processing position near the undersurface of the substrate and a retreat position remote from the undersurface of the substrate, the lower side member further including a processing liquid feed path having a processing liquid discharge opening for feeding the processing liquid to a space between an upper surface of the lower side member moved to the processing position and the undersurface of the substrate held by the holding member,

wherein the lower side member is movable to a processing liquid scattering position, for rotating the substrate to scatter away the processing liquid, in addition to the processing position and the retreat position, and

wherein the lower side member comprises a body structured by metal materials and a coating layer of a hydrophobic resin on a surface of the body, the surface of the coating layer contacts with the processing liquid, the coating layer has a hydrophobicity enough to form a stable layer of processing liquid in the space between the upper surface of the lower side member and the undersurface of the substrate.

4. (Previously presented) The substrate processing apparatus according to claim 1 or 3, wherein the lower side member includes a lower side temperature adjusting mechanism for adjusting a temperature of the processing liquid.

5. (Previously presented) The substrate processing apparatus according to claim 1 or 3, wherein the lower side member includes a lower side temperature adjusting mechanism for adjusting a

temperature of the processing liquid and the lower side temperature adjusting mechanism includes a temperature adjusting path which is provided inside the lower side member and through which a temperature adjusted fluid flows.

6. (Previously presented) The substrate processing apparatus according to claim 1 or 3, further comprising a processing liquid feed path having a process liquid discharge opening for feeding the processing liquid to an upper surface of the substrate held by the holding member.

7. (Previously presented) The substrate processing apparatus according to claim 1 or 3, further comprising an upper side member which can be moved relatively with respect to an upper surface of the substrate held by the holding member to be near the upper surface of the substrate.

8. (Previously presented) The substrate processing apparatus according to claim 1 or 3, further comprising an upper side member which can be moved relatively with respect to an upper surface of the substrate held by the holding member to be near the upper surface of the substrate and wherein said upper side member comprises a processing liquid feed path having a liquid temperature adjusting mechanism for adjusting a temperature of the processing liquid passing through the processing liquid feed path.

9. (Previously presented) The substrate processing apparatus according to claim 1 or 3, further comprising an upper side member which can be moved relatively with respect to an upper surface of the substrate held by the holding member to be near the upper surface of the substrate and wherein the upper side member comprises an upper side temperature adjusting mechanism for adjusting a temperature of the processing liquid on the upper surface of the substrate.

10. (Previously presented, Withdrawn) A substrate processing apparatus for processing a substrate with a processing liquid fed to the substrate, comprising:

a holding member for holding the substrate in a substantially horizontal position;

a lower side member disposed in a substantially horizontal position below the substrate held by the holding member, an upper surface of the lower side member having a hydrophobic property such that it comes into contact with the processing liquid at a contact angle of not less than 50°; and

a first processing liquid feed path for feeding the processing liquid into a space between an undersurface of the substrate held by the holding member and the upper surface of the lower side member.

11. (Previously presented, Withdrawn) A substrate processing apparatus according to claim 10, wherein said lower side member is made of material, a surface of which is treated to have said hydrophobic property.

12. (Original, Withdrawn) A substrate processing apparatus according to claim 10, further comprising:

a lift mechanism for moving the lower side member upward and downward so that a distance between the undersurface of the substrate held by the holding member and the upper surface of the lower side member can be altered.

13. (Previously presented, Withdrawn) A substrate processing apparatus according to claim 10, wherein a surface of the holding member, which comes into contact with the substrate, has said hydrophobic property .

14. (Previously presented, Withdrawn) A substrate processing apparatus according to claim 10, further comprising:

a rotating mechanism for rotating the holding member; and

a second processing liquid feed path for feeding the processing liquid to an upper surface of the substrate held by the holding member.

15. (Previously presented, Withdrawn) A substrate processing apparatus according to claim 14, further comprising:

a lift mechanism for moving the lower member to adjust a distance between the undersurface of the substrate and the upper surface of the lower side member so that the layer of the processing liquid and a puddle of the processing liquid are jointed together to cover up the entire surface, including an edge surface of the substrate with the processing liquid.

16. (Previously presented, Withdrawn) A substrate processing apparatus according to claim 10, further comprising:

a rotation mechanism for rotating the holding member;

an upper side member with an undersurface having said hydrophobic property and being disposed so that the undersurface of the upper side member is opposite to the upper surface of the substrate held by the holding member; and

a second processing liquid feed path for feeding the processing liquid into a space between the upper surface of the substrate held by the holding member and the undersurface of the upper side member.

17. (Previously presented, Withdrawn) A substrate processing apparatus according to claim 16, further comprising:

a lift mechanism for moving the upper side member to adjust a distance between the upper surface of the substrate and the undersurface of the upper side member and a distance between the undersurface of the substrate and the upper surface of the lower side member so that layers of the processing liquid formed on both the surfaces of the substrate are jointed together to cover up the entire surface including an edge surface of the substrate with the processing liquid.

18. (Previously presented, Withdrawn) A substrate processing apparatus according to claim 16, wherein

the first processing liquid feed path comprises a first processing liquid discharge opening formed by piercing through the lower side member in a thickness-wise direction at the substantial center of the lower side member; and a first processing liquid feed pipe disposed in communication with the first processing liquid discharge opening, and

the second processing liquid feed path comprises a second processing liquid discharge opening formed by piercing through the upper side member in a thickness-wise direction at the substantial center of the upper member; and a second processing liquid feed pipe disposed in communication with the second processing liquid discharge opening.

19. (Original, Withdrawn) A substrate processing apparatus according to claim 16, wherein the upper side member is treated to have a hydrophobic property at least on its undersurface.

20-34. (Canceled)

35. (Currently amended) A substrate processing apparatus for processing a substrate with a processing liquid fed to the substrate comprising:

a holding member for holding the substrate;

a lower side member which is movable relative to an undersurface of the substrate held by the holding member between a processing position near the undersurface of the substrate and a retreat position remote from the undersurface of the substrate, the lower side member including a body structured by metal materials and a coating layer of a hydrophobic resin on a surface of the body, the surface of the coating layer contacts with the processing liquid, the coating layer has a hydrophobicity enough to form a stable layer of processing liquid in a gap between an upper surface of the lower side member and an undersurface of the substrate;

a processing liquid feed path having a processing liquid discharge opening for feeding the processing liquid to the space between the upper surface of the lower side member moved to the processing position and the undersurface of the substrate held by the holding member; and

an upper side member which is movable relative to an upper surface of the substrate held by the holding member to be near the upper surface of the substrate,

wherein the upper side member includes an upper side temperature adjusting mechanism for adjusting a temperature of the processing liquid on the upper surface of the substrate.